IN THE CLAIMS:

1. (Original) A method for performing an input/output operation to a storage device from a computer, the method comprising the steps of:

selecting a first data path from a set of data paths between the computer and the storage device;

attempting the input/output operation using the selected first data path;

selecting, in response to an error in the input/output operation using the first data path, a next data path from the set of data paths; and

attempting the input/output operation using the selected next data path.

2. (Original) The method of claim 1 wherein the set of data paths is dynamically generated in response to storage device events.

3. (Original) The method of claim 2 wherein the storage device event further comprises a Fibre Channel loop initialization event.

4. (Original) The method of claim 1 wherein the first data path further comprises a last used data path associated with the storage device.

5. (Original) The method of claim 1 wherein the storage device further comprises a disk drive.

6. (Original) The method of claim 5 wherein the disk drive is operatively interconnected with the computer by a Fibre Channel Arbitrated Loop.

7. (Original) The method of claim 1 wherein the computer further comprises a file server.

1   8. (Original) The method of claim 1 wherein the set of data paths are described by a re-

2   lated set of data structures.

1   9. (Original) The method of claim 1 wherein the data paths utilize a Fibre Channel con-

2   nection.

1   10. (Currently Amended) A method for maintaining a set of data paths accessible by a

2   set of upper level services of a storage operating system of a computer, the method com-

3   prising the steps of:

4   creating a device instance associated with a storage device;

5   creating a first path instance distinct from the device instance, where the first path

6   instance is associated with a first path to the storage device;

7   creating, in response to events identifying an addition of a path, an additional path

8   instance associated with an additional path to the storage device, where the additional

9   path is distinct from the device instance; and

10   deleting, in response to events identifying a removal of a path, a path instance as-

11   sociated with the removed path.

1   11. (Original) The method of claim 10 wherein the step of creating a device instance oc-

2   curs in response to receipt of an event identifying an addition of a storage device.

1   12. (Original) The method of claim 10 wherein the events identifying an addition of a

2   path is a Fibre Channel loop initialization event.

1   13. (Original) The method of claim 10 wherein the events identifying removal of a path is

2   a Fibre Channel loop initialization event.

1   14. (Original) The method of claim 10 wherein the step of creating an additional path in-

2   stance further comprises the step of linking the additional path instance to a linked list of

3   path instances associated with the storage device.

1   15. (Original) The method of claim 10 wherein the device instance and path instances are

2   accessible via an application program interface.

1   16. (Original) The method of claim 10 wherein the set of upper level services further

2   comprises a redundant array of inexpensive disks layer of the storage operating system.

1   17. (Original) A computer for use with a plurality of storage devices having one or more

2   data paths associated with the storage devices, the computer comprising:

3   means for detecting changes to the data paths associated with the storage devices;

4   means for maintaining a set of path instances associated with each of the plurality

5   of storage devices, the data path instances accessible to a set of upper level services;

6   means for performing input/output operations to the plurality of storage devices

7   using a first data path;

8   means for selecting alternate data paths, in response to an error occurring with the

9   first data path; and

10   means for performing input/output operations to the plurality of storage devices

11   using the selected alternate data paths.

1   18. (Original) The computer of claim 17 wherein the upper level services access the data

2   path instances via an application program interface.

1   19. (Original) A storage operating system executing on a computer, the storage operating

2   system comprising:

3   a routing administration layer, the routing administration layer dynamically updat-

4   ing a set of device instances, each device instance associated with a storage device;

4

5   wherein each device instance includes at least one path instance, each path in-

6 stance identifying a path from the computer to the associated storage device; and

7   a set of upper level services, the upper level services capable of accessing the de-

8 vice instances.

1 20. (Original) The storage operating system of claim 19 wherein the routing administra-

2 tion layer further comprises an application program interface, the application program

3 interface providing the upper level services access to the set of device instances.

1 21. (Original) The storage operating system of claim 19 wherein the upper level services

2 further comprises a redundant array of independent disks layer of the storage operating

3 system.

1 22. (Original) A computer-readable medium, including program instructions executing

2 on a computer, for performing an input/output operation to a storage device having one or

3 more data paths to the computer, the program instructions including steps for:

4   selecting a first data path from a linked list of data paths to the storage device;

5   attempting the input/output operation using the selected first data path;

6   selecting, in response to an error in the input/output operation using the first data

7 path, a next data path from the linked list of data paths; and

8   attempting the input/output operation using the selected next data path.

1 23. (Original) A computer-readable medium, including program instructions executing

2 on a computer, for maintaining a set of data paths accessible by a set of upper level ser-

3 vices of a storage operating system, the program instructions including steps for:

4   creating a device instance associated with a storage device;

5   creating a first path instance associated with a first path to the storage device;

6   creating, in response to events identifying an addition of a path, an additional path

7 instance associated with additional path to the storage device; and

8   deleting, in response to events identifying a removal of a path, a path instance associated

9   with the removed path.

1   24. (Cancelled)

1   25. (Previously Presented) The method of claim 1 further comprising:

2   dynamically generating the set of data paths in response to a storage device event.

1   26. (Previously Presented) The method of claim 1 further comprising:

2   dynamically generating the set of data paths in response to a Fibre Channel loop

3   initialization event.

1   27. (Previously Presented) The method of claim 1 further comprising:

2   selecting, as the first data path, a last used data path associated with the storage

3   device.

1   28. (Previously Presented) The method of claim 1 further comprising:

2   performing the input/output operation to a disk drive as the storage device.

1   29. (Previously Presented) The method of claim 28 further comprising:

2   interconnecting the computer with the disk drive by a Fibre Channel Loop.

1   30. (Previously Presented) The method of claim 1 further comprising:

2   performing the input/output operation from a file server as the computer.

1   31. (Previously Presented) The method of claim 1 further comprising:

2   describing the set of data paths by a set of data structures.

1   32. (Previously Presented) The method of claim 1 further comprising:

2   utilizing a Fibre Channel connection as a data path of the set of data paths.

1   33. (Previously Presented) A computer for performing an input/output operation to a

2   storage device having one or more data paths to the computer, the computer comprising:

3   means for selecting a first data path from a set of data paths to the storage device;

4   means for attempting the input/output operation using the selected first data path;

5   means for selecting, in response to an error in the input/output operation using the

6   first data path, a next data path from the set of data paths; and

7   means for attempting the input/output operation using the selected next data path.

1   34. (Previously Presented) The computer of claim 33 further comprising:

2   means for dynamically generating the set of data paths in response to a storage

3   device event.

1   35. (Previously Presented) The computer of claim 33 further comprising:

2   means for dynamically generating the set of data paths in response to a Fibre

3   Channel loop initialization event.

1   36. (Previously Presented) The computer of claim 33 further comprising:

2   means for selecting, as the first data path, a last used data path associated with the

3   storage device.

1   37. (Previously Presented) The computer of claim 33 further comprising:

2   means for performing the input/output operation to a disk drive as the storage de-

3   vice.

1   38. (Previously Presented) The computer of claim 37 further comprising:

2   means for interconnecting the computer with the disk drive by a Fibre Channel

3   Loop.

1   39. (Previously Presented) The computer of claim 33 further comprising:

2   means for performing the input/output operation from a file server as the com-

3   puter.

1   40. (Previously Presented) The computer of claim 33 further comprising:

2   means for describing the set of data paths by a set of data structures.

1   41. (Previously Presented) The computer of claim 33 further comprising:

2   means for utilizing a Fibre Channel connection as a data path of the set of data

3   paths.

1   42. (Previously Presented) A system for performing an input/output operation between a

2   computer and a storage device, comprising:

3   a plurality of data paths between the computer and the storage device;

4   a first data path selected from the plurality of data paths;

5   a first software code in a routing administrator, to attempt the input/output opera-

6   tion using the selected first data path;

7   a second software code to select, in response to an error in the input/output opera-

8   tion using the first data path, a next data path from the plurality of data paths; and

9   a third software code to attempt the input/output operation using the selected next

10 data path.

1   43. (Previously Presented) The system of claim 42 further comprising:

2   a plurality of data paths dynamically generated in response to a storage device

3   event.

1   44. (Previously Presented) The system of claim 42 further comprising:

2   a plurality of data paths dynamically generated in response to a Fibre Channel

3   loop initialization event.

1   45. (Previously Presented) The system of claim 42 further comprising:

2   the first data path is a last used data path associated with the storage device.

1   46. (Previously Presented) The system of claim 42 further comprising:

2   a disk drive as the storage device.

1   47. (Previously Presented) The system of claim 42 further comprising:

2   a Fibre Channel Loop connecting the computer to a disk drive as the storage de-

3   vice.

1   48. (Previously Presented) The system of claim 42 further comprising:

2   a file server as the computer.

1   49. (Previously Presented) The system of claim 42 further comprising:

2   a data structure to describe the plurality of data paths.

1   50. (Previously Presented) The system of claim 42 further comprising:

2   a Fibre Channel connection as a path of the plurality of data paths.